

GROWING GIFTED LEARNERS THROUGH A MULTI-AGE APPROACH

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MEET YOUR PRESENTERS

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WHAT WILL BE LEARNING TODAY?

- Part One: Rationale for multi-age grouping
 - Examine the challenges faced with growing gifted students.
 - What does the literature say about multi-age grouping?
- Part Two: How to structure multi-age grouping for gifted learners.
 - How to develop instruction for multi-age groups using concept-based learning and backwards plannings.
- Part Three: How to implement multi-age grouping for gifted learners.
 - Look at examples of strategies, lessons and units.

PART ONE: RATIONALE

CHALLENGES WITH GIFTED GROWTH



- Low-achieving students (lowest 10%) show academic gains at a rate of two or three times that of those in the top 10%.
- International comparisons also show top American students falling short, with no signs suggesting this will change anytime soon.
- Socioeconomically disadvantaged gifted students are most at risk due to the likelihood of having uneducated parents, less experienced teachers, and less advantages in their neighborhood schools.

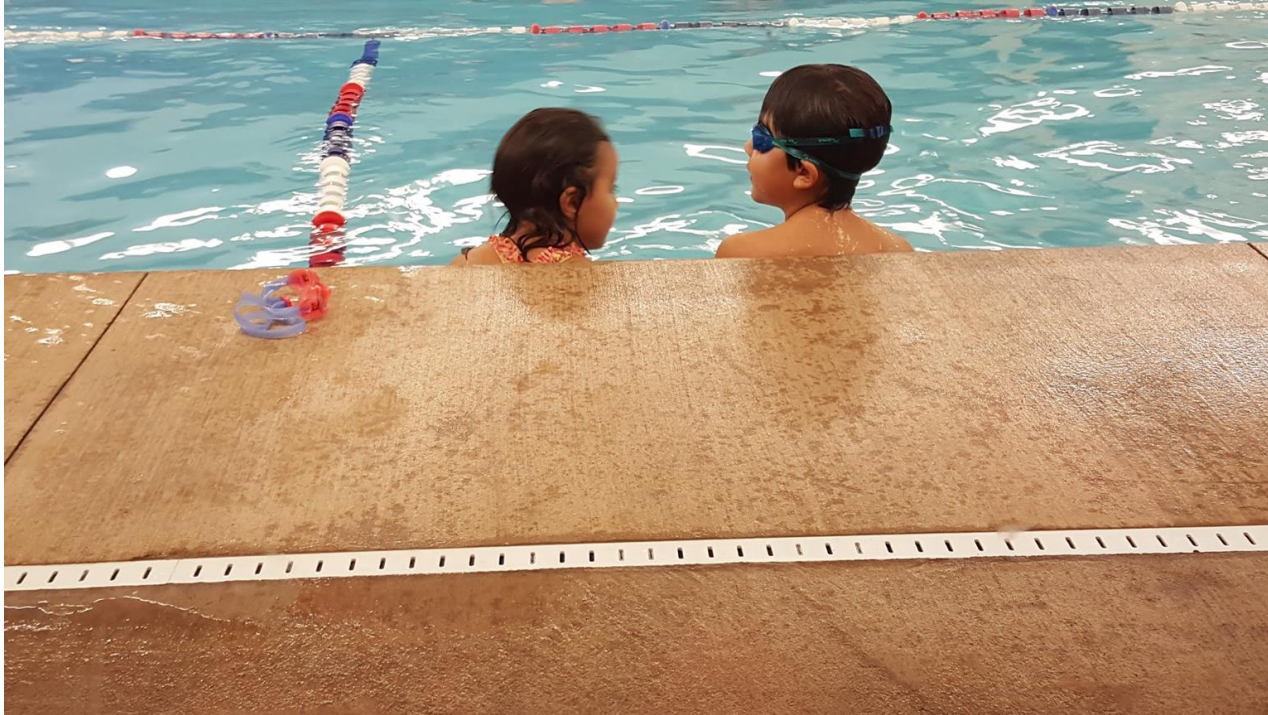
SIGNIFICANCE



“Nationally, results on the National Assessment of Educational Progress (NAEP; NCES, 2013) exams in mathematics and reading indicate no significant improvement over time in the percentage of students scoring at advanced levels in any age group. While progress is being made in raising the achievement of students in the lowest 10%, the achievement of students in the top 10% is languishing. Large gaps persist at the advanced level of achievement on NAEP and on state assessments between socio-economic and racial subgroups. This “excellence gap” in achievement has serious implications for our ability to maintain a competitive workforce.”

-- NAGC Position Statement, 2014

GROUP CHILDREN BASED ON READINESS OR AGE?



MULTI-AGE RESEARCH



Current research on the impact of multi-age grouping on student achievement is sparse. However, older research does suggest that multi-age grouping does show significant gains in reading and language skills (Skapski, 1960). More current studies also suggest that multi-age strategies have a positive impact on language development in younger students, as well as a reduction in student disobedience (Louge, 2006). Overall there is some evidence that multi-age strategies helps students reach higher cognitive developmental levels than students in same-age classrooms (Frosco et al, 2004).

OTHER ADVANTAGES ACCORDING TO RESEARCH



- Multi-age classrooms promote a caring environment.
- Teachers generally work with the same students for a number of years, which builds stronger parent-teacher relationships and a sense of community.
- Although multi-age appears to benefit gifted learners as a whole, disadvantaged students especially benefit.
- Multi-age teachers focus on project-based learning, which allows for more individualized learning. This is tied to more positive student attitudes, less discipline problems, higher attendance, and better peer relationships (Veeman, 1995).

UNDERREPRESENTED POPULATIONS

Students from poverty are far less likely to be identified as AIG as students from more affluent backgrounds. According to the U.S. Department of Education, about 47% of identified students are from the top family income quartile, while 9% are from the bottom quartile. Similarly, underrepresentation occurs with most minority groups (African American, Hispanic/Latino, and Native American).

While most districts have made a greater attempt to identify underrepresented populations in gifted programs (typically through alternative assessment strategies), there has been less emphasis on how to best help these students once they are placed.

UNDERREPRESENTED POPULATIONS

Gifted students from disadvantaged backgrounds may possess traits that could potentially impact their academic success. These include:

- decreased parental involvement
- negative influences outside of the school environment
- lower attendance rates
- transience
- emphasis on peer relationships over academics
- lower self-esteem
- language barriers; lower verbal ability
- poor work habits
- less out of school educational experiences



LOW SOCIOECONOMIC STATUS IN GIFTED EDUCATION

GROUPING BY MULTI-AGE PROVIDES MORE OPPORTUNITIES!

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PART 2 STRUCTURE

BACKWARDS PLANNING

1. What standards naturally align cross discipline and cross grade level?
2. Begin with the end in mind- what do we want students to understand (concepts/generalizations) and know (standards based)?
3. Plan learning experiences and instruction.



ALIGNMENT TO STANDARDS- LITERACY

Third Grade	Fourth Grade	Fifth Grade
R.L. 3.4 Determine the meaning of words and phrases as they are used in a text, distinguishing literal from nonliteral language.	R.L. 4.4 Determine the meaning of words and phrases as they are used in a text, including those that allude to significant characters found in mythology (e.g., Herculean).	R.L. 5.4 Determine the meaning of words and phrases as they are used in a text, including figurative language such as metaphors and similes.
R.I. 3.9 Compare and contrast the most important points and key details presented in two texts on the same topic.	R.I. 4.9 Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.	R.I. 5.9 Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably.
W. 3.1 Write opinion pieces on topics or texts, supporting a point of view with reasons	W. 3.1 Write opinion pieces on topics or texts, supporting a point of view with reasons and information.	W. 3.1 Write opinion pieces on topics or texts, supporting a point of view with reasons and information.

ALIGNMENT TO STANDARDS- SOCIAL STUDIES

Third Grade	Fourth Grade	Fifth Grade
3.E.2 Understand entrepreneurship in a market economy.	4.E.1 Understand how a market economy impacts life in North Carolina.	5.E.1 Understand how a market economy impacts life in the United States.
3.C.1 Understand how diverse cultures are visible in local and regional communities.	4.C.1 Understand the impact of various cultural groups on North Carolina.	5.C.1 Understand how increased diversity resulted from migration, settlement patterns and economic development in the United States.

CONCEPT-BASED LEARNING

*How does the concept of **Culture** align discipline and grade level?*

- Beliefs, values, knowledge, and traditions make-up culture.
- Human cultures have similarities and differences.
- Cultures are ever-changing.
- Culture helps us understand ourselves as individuals and as members of society.
- Human beings create, learn, and adapt culture.



CONCEPT BASED LEARNING- CREATIVITY AND ECONOMY

Creativity comes in many forms.

Technology leads to economic growth.

Economy is driven by supply and demand.

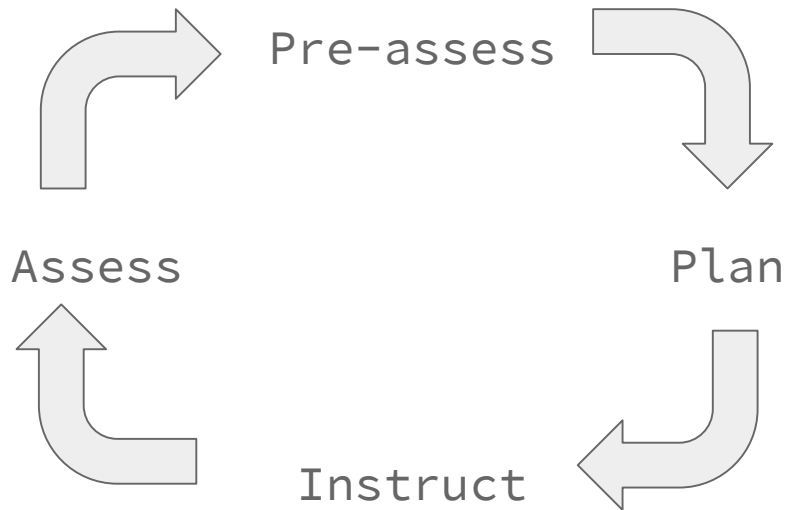
Creativity and demand lead to invention.

Creativity is necessary in a competitive economy.

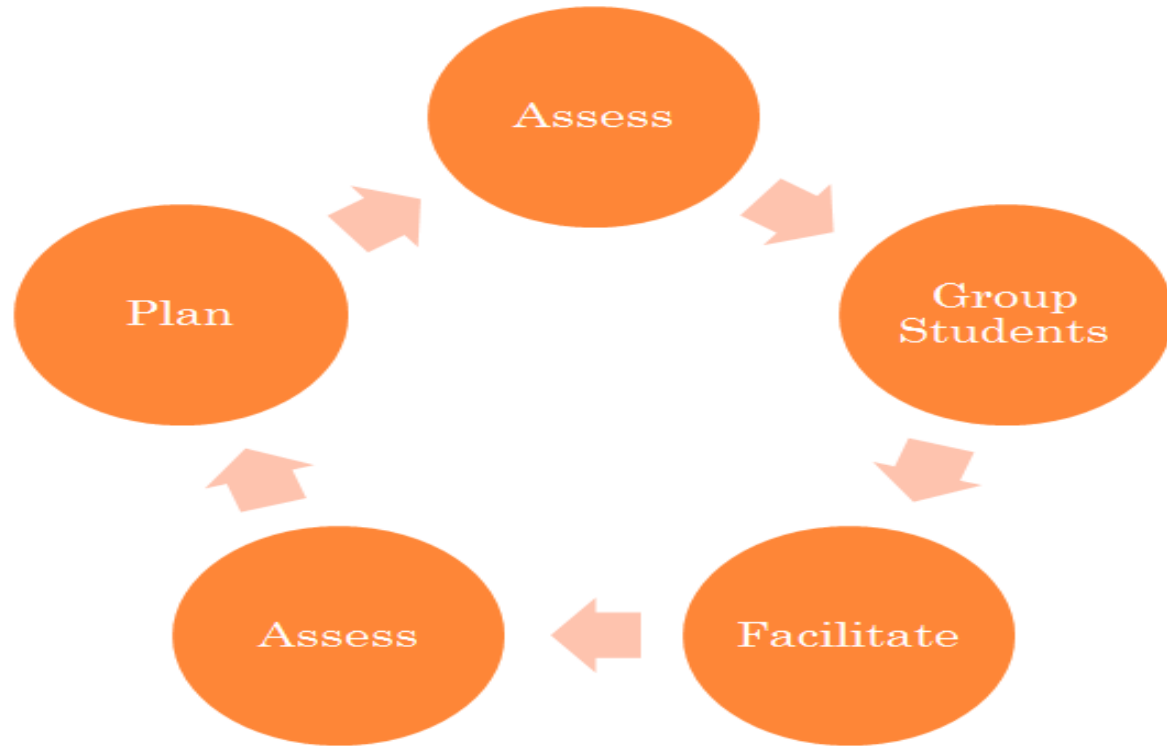
People use creativity to solve problems.



HOW TO GROUP FOR MULTI-AGE



HOW TO GROUP FOR MULTI-AGE



PART 3: IMPLEMENTATION

STRATEGIES, LESSONS AND UNITS

Hilda Taba Concept Development

Socratic Seminar

Problem Based Learning

Curry and Samara

Bruner

Rubrics to accurately assess varying levels appropriately



HILDA TABA STRATEGIES



Hilda Taba was a curriculum theorist and teacher educator whose ideas were used to develop four thinking strategies that help students move beyond facts to basic ideas (generalizations) and larger concepts. Taba developed the theory of inductive thinking. Her strategies are effective for gifted multi-age learners due to being student-centered with open-ended questioning. Taba also easily lends itself towards interdisciplinary studies and is founded upon concept-based learning.

HILDA TABA STRATEGIES

- **Concept development** – Students make inferences based on pre-existing facts to develop generalizations related to a concept.
- **Interpretation of data** – Students analyze cause and effect to develop conclusions, then write generalizations.
- **Application of generalizations** – Students use generalizations to explain events and make predictions.
- **Interpretations of feelings, attitudes, and values** – Students consider facts, motivations, and feelings tied to a situation, consider and evaluate courses of action, then make real-life connections to generalize.

SOCRATIC SEMINAR

- Formal discussions based on a text and one or more values/concepts.
- The teacher serves as a facilitator by posing open-ended questions and withholding judgement of responses.
- Students are expected to listen attentively to others, to think critically, and to articulate their own ideas.



SAMPLE SOCRATIC SEMINAR (PREAMBLE OF THE CONSTITUTION)

Key values/ideas: Citizenship, government, one & many, progress

Opening:

1. What is the single, most important word in the Preamble? (round-robin response)
2. What makes that word so significant? (spontaneous discussion)

Core discussion:

3. Why do you think the authors of the Preamble chose to capitalize the words that they did?
4. What do you think the authors mean by “domestic Tranquility”? Why is it important?

SAMPLE SOCRATIC SEMINAR (CONTINUED)



5. What do you think they mean by “general Welfare”? Why is that important?
6. Of the six purposes for the Constitution given here, which do you think is most important? Why?
7. Based on this Preamble, what do you think is the purpose for the Constitution? Do you think it has changed in the 200 plus years since?

Closing:

8. If we were to revise the Constitution for the 21st Century, what purpose would you choose to add to those that are already given? Why?

For this lesson and more more examples, visit <http://www.paideia.org/lesson-plans/the-preamble-to-the-us-constitution/>

PROBLEM BASED LEARNING

Scenario- Many environmental scientists are concerned about the population of Monarch butterflies. Each year, the number of monarchs decreases. This year many scientists and people who love monarchs have planted more milkweed plants to try to increase the number of monarchs. You are an environmental scientist. Use data to predict if more monarchs will be at the overwintering site in Mexico this winter (will the population increase?). After analyzing all of the data with your team of scientists, determine your conclusion. Be sure to give specific reasons to support your conclusion.

PROBLEM BASE LEARNING- MONARCH SCENARIO OUTCOME...

Scenario:
Many environmental scientists are concerned about the population of monarch butterflies. Each year, the monarchs migrate from the United States to Mexico. This year many scientists had a hunch that the monarch population would decrease. They have monarchs have planted more milkweed plants to increase the number of monarchs. You are an environmental scientist. Use data to predict if more monarchs will be overwintering in Mexico this winter (with the paper monarchs). After studying all of the data with your group, determine your conclusion. Be sure to give reasons to support your conclusion.

Task:
You are given a set of data to use to predict the monarch population. You are given a set of data to use to predict the monarch population. You are given a set of data to use to predict the monarch population.

Learning Issues:
Our conclusion is there will be less monarchs this year because milkweed cause doesn't last long.

What would be helpful information in solving this problem?
- info about monarch lifecycle
- population of monarchs in U.S. now and previous years
- how many monarchs travel to Mexico each year?

Learning Issues:
- how to read the data
- How many total monarch "first sightings" in different years?
- what is the difference between years?

Conclusion
Less monarchs this year because milkweed doesn't last long.
More monarchs because more milkweed this year

New learning issues
Do monarchs always clump together the same way?
Life of milkweed?
How many monarchs show up in milkweed?

CURRY & SAMARA UNITS

- Standards are taught through an overarching concept.
- Moves from basic to abstract levels of thinking within the content standards.
- Students create authentic products for assessment.

From www.curriculumproject.com

Conflict						
	Remembering	Understanding	Applying	Analyzing	Creative Thinking	Critical Thinking
<u>PERSPECTIVE</u> Conflict has multiple perspectives	1. List all of the conflicts that occur in <i>The Fighting Ground</i> list	2. Explain what happened in a conflict from the perspective of 3 different people poster	3. Using what you have learned about Jonathan, what would he say to future generations about his perspective and the lessons that he learned in battle? letter	4. Compare and contrast the American and British perspectives from the conflicts in American Revolution Venn diagram	5. Create a poem that shows how Jonathan's perspective of conflict is transformed from the beginning of the story to the end poem	6. Justify an original perspective that the soldiers did not consider of a conflict that happened during the American Revolution Speech to the soldiers
<u>CHANGE</u> Conflict leads to change	7. Identify changes that that occurred leading up to the conflict of the American Revolution. List	8. Explain how the Intolerable Acts lead to conflict between the British and Patriots. How did their relationship change? Essay	9. After learning about the conflict at Lexington and Concord, create a flyer about the conflict that will change the colonists' views about joining a "united army". Flyer	10. Choose one of the charges (conflicts) against the king from the Declaration of Independence. Use your own words to explain the charge and outline how the charge lead to changes in the colonies. Oral Presentation	11. Create a visual of your choice that illustrates how the conflict between Britain and the colonists lead to changes in the United States at the end of the war. Visual of Your Choice	12. Determine how the United States would be different today if the patriots had not won the conflict. What changes would the colonists have faced because of their participation in the conflict against Britain? Seminar/Discussion
<u>CONSEQUENCES</u> Conflict can result in positive and/or negative consequences	13. Recall what you know about the consequences associated with the American Revolution. Brainstorming/ concept map	14. Sort the consequences of the American Revolution as either positive, negative, or both. Sorting activity and chart	15. Research a historical figure and explain how their actions during the war had positive and/or negative consequences for themselves and others. Power point	16. Determine how Jonathan's decision to go to war ultimately impacted other people in positive and/or negative ways. Character monologue	17. Create a set of journal entries or fictional newspaper articles that show how the war impacted people in colonies in different ways. Journal entries or newspaper articles	18. Did Jonathan's participation in the war make him a better or worse person? Explain and justify your answer. Debate
<u>Emotion</u> Conflict evokes emotion	19. Create a timeline that shows the external (action) and internal (emotional) details from the novel. External/internal timeline	20. Pretend to be Toliver or Jonathan. Create a decision making chart to weigh the pros and cons of taking risks in the novel. Be sure to look at both emotional and physical consequences. Chart	21. Rewrite the ending of the novel. Think about how the story would have been different if Toliver or Jonathan had taken time to think about their decision to participate in the war. Be sure to illustrate how their emotions would have played a role in their decisions. Story	22. Analyze the causes and effects of the emotions people experienced during the American Revolution. Hilda Taba Interpretation of Data	23. Write a creative monologue or skit that details the emotions that a "supporting" character in the novel might be facing. Monologue or skit	24. Discuss excerpt of <i>The Fighting Ground</i> to understand how one conflict can evoke wide range of emotions in people? Paideia Seminar
Independent Study	25. Brainstorm a list of generalizations about the American Revolution. List	26. Choose a generalization from list to study and write a journal entry about why you choose your topic. Paper	27. Create a plan for researching your generalization. What books and resources will you use? What will be the timeline? Graphic Organizer	28. Research your generalization using your graphic organizer. Collect and organize your information in a form of your choice. Notes	29. Create a presentation to share your research with an audience of your choice. Presentation	30. Determine whether your teacher should use your generalization for future studies of the American Revolution. Discussion

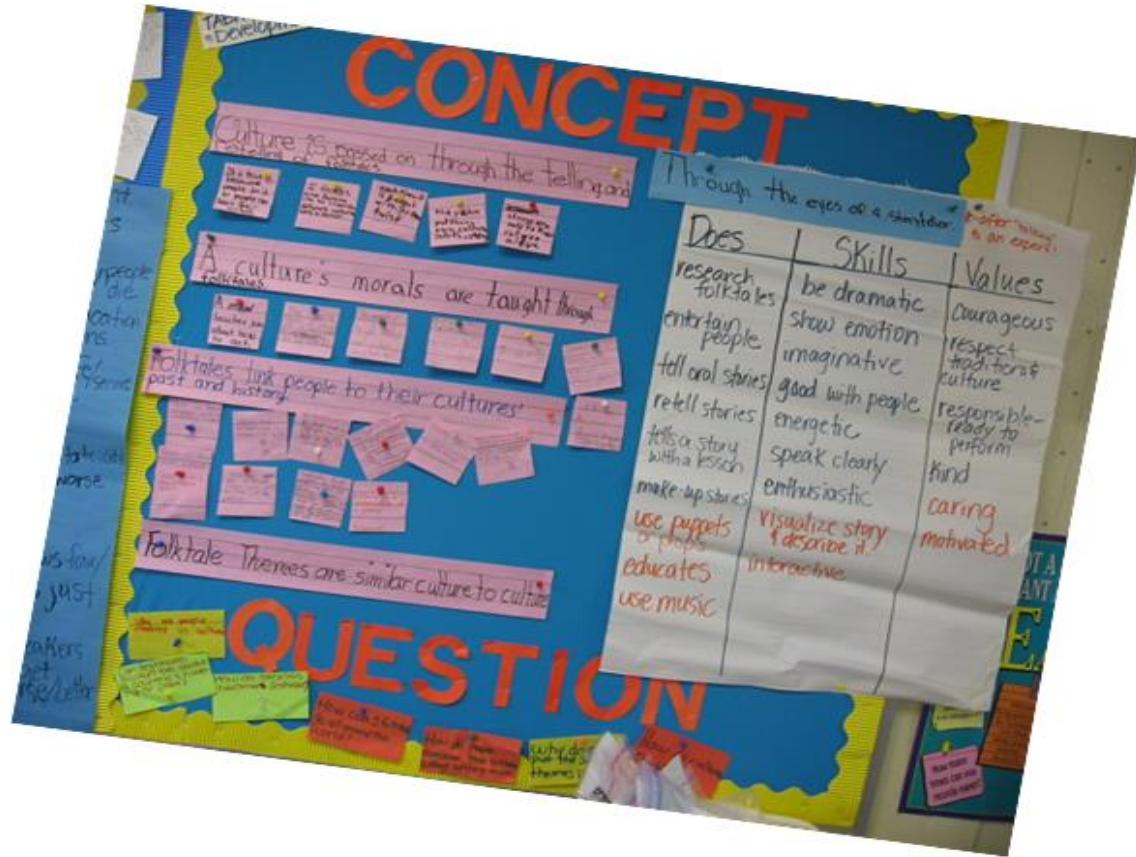
BRUNER LESSONS



- Inquiry-based in which educators guide students through the basic structure of academic disciplines on a student-appropriate level.
- Students act as “real inquirers” by participating in realistic discovery and explanation.
 - Participate in research by learning how to work as a researcher
 - Learn about rocks and minerals by practicing geology.
- Guest speakers may be invited to the classroom as students learn about the given discipline.

SAMPLE BRUNER LESSON

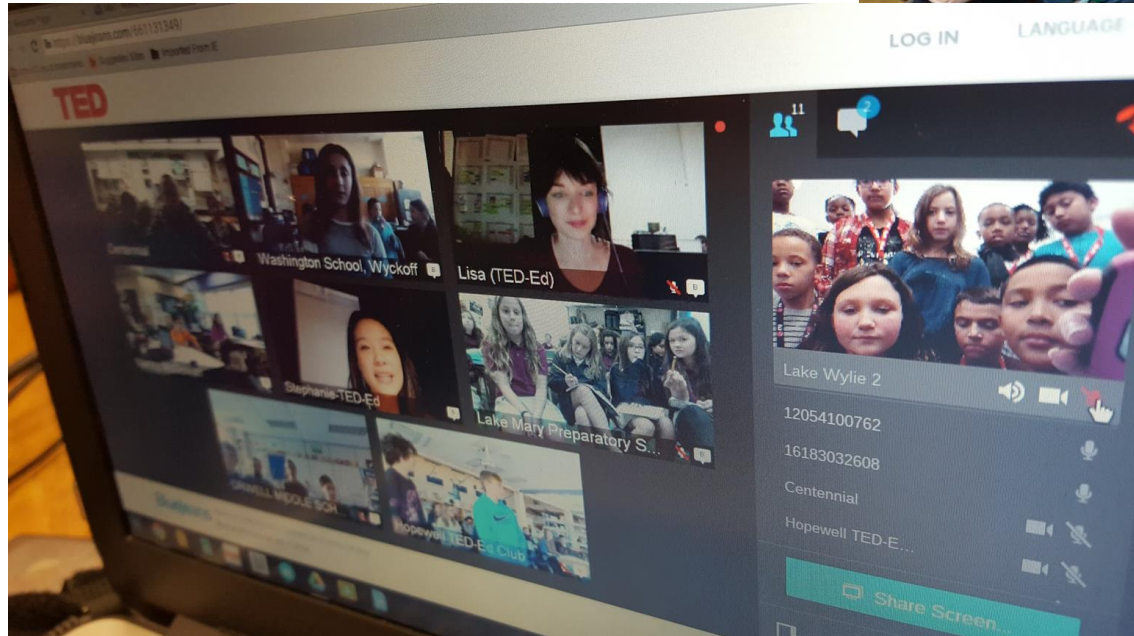
“Looking Through the Eyes of a Storyteller” Bruner lesson for grades 2-3. Culture through Folktales, Fables and Fairytails. Social Studies standards, reading and writing.



RUBRICS TO ASSESS VARYING LEVELS

	1 point	2 points	3 points	4 points
Note taking grid	Less than 3 sources cited Little information is recorded	At least 3 sources cited Organized Little information is recorded	At least 3 sources cited in detail Organized Information is recorded	At least 3 sources cited in detail Organized Information is recorded in detail
Paraphrase	Little evidence of paraphrasing in note taking grid and presentation	Some evidence of paraphrasing in note taking grid and presentation	Evidence of paraphrasing in note taking grid and report	Strong evidence of paraphrasing in note taking grid and report
Bibliography	Bibliography is not included	1-2 Sources cited	At least 3 sources cited with major errors	At least 3 sources cited following correct MLA format with few to no errors
Organization	Information lacks organization, missing introduction, body and/or conclusion paragraphs	Information is somewhat organized, parts of report (introduction, body, conclusion) are not complete.	Information is organized with clear introduction, body and conclusion.	Information is well organized and all parts (introduction, body conclusion) contribute to the overall effect of the paper.
Content	Little information about topic provided	Information about topic is provided, but details are not relevant and/or do not support main ideas.	Relevant details and information about topic provided.	Relevant details and information about topic provided and clearly communicates information.
Grammar/Conventions	Many grammar/spelling errors which making it difficult to understand.	Many grammar/spelling errors, but still understandable.	Few grammar/spelling errors.	No grammar/spelling errors

TED TALKS WITH TED ED



TED Ed

Topics Varied in Interest, Depth,
and Complexity

GMO's- What are those?

Dream Psychology

Music Heals

What color is the dress?- the science behind it.

Mythical Beasts

Wormholes- Real or Theory?



BEST PRACTICES IN GIFTED

Sophistication

Acceleration

Enrichment

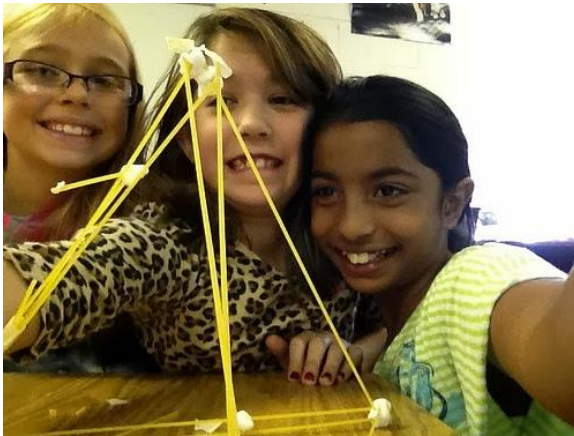
Compacting



FINAL THOUGHTS

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Pros...



Cons...



SOURCES

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